

### **Abstract of the Disclosure**

A liquid/liquid extraction method is used for separating a perfluorinated polyether (PFPE) into two molecular-weight distributions using an alcohol or cyclic ether as one solvent and a fluorinated solvent as the other solvent. The more polar alcohol or cyclic ether solvent extracts the lower molecular weight PFPE and the less polar fluorinated solvent extracts the higher molecular weight PFPE. In addition, when the PFPE is a mixture of PFPEs with different end groups, such as a mixture of predominantly Z-Tetraol but with other PFPEs with Z-Dol end groups, there is an enrichment of the Z-Tetraol in the more polar solvent. The preferred PFPE is a mixture of PFPEs in as-purchased Z-Tetraol and the preferred solvents are methanol or trifluoroethanol as one solvent and a perfluorinated hydrocarbon, such as perfluorohexane, as the other solvent.